Notice No.4

Rules and Regulations for the Classification of Offshore Units July 2019

The status of this Rule set is amended as shown and is now to be read in conjunction with this and prior Notices. Any corrigenda included in the Notice are effective immediately.

Please note that corrigenda amends to paragraphs, Tables and Figures are not shown in their entirety.

Issue date: June 2020

Amendments to	**Effective date**	**IACS/IMO implementation (if applicable)**
Part 1, Chapter 2, Section 2	1 July 2020	NA
Part 1, Chapter 3, Section 23	1 July 2020	NA
Part 4, Chapter 8, Section 2	1 July 2020	1 July 2020
Part 11, Chapter 4, Section 5	1 July 2020	1 July 2020

Lloyd's Register

Part 1, Chapter 2
Classification Regulations

■ *Section 2*
Definitions, character of classification and class notations

2.9 Descriptive Notes/Supplementary Character

(Part only shown)
2.9.4 **ShipRight()**. Where LR's *ShipRight Procedures* for the following have been applied on a voluntary basis to surface type units, a descriptive note showing the associated characters of the Procedure(s) within brackets will, at the Owner's request, be entered on the Class Direct website, preceded by the word **ShipRight** e.g. **ShipRight(ES, SERS)**~~-~~, *see also* ShipRight Procedures Overview and *Pt 1, Ch 2 Classification Regulations* of the *Rules and Regulations for the Classification of Ships, July 2019*:

ThCM	Thruster Condition Monitoring
HCD1()	Human-Centred Design Level 1

Part 1, Chapter 3
Periodical Survey Regulations

■ *Section 23*
Notations and Descriptive Notes

23.2 Descriptive Notes

(Part only shown)

Description	**Information**	**Further information**
Sea Water Desalination Plant		
Human-Centred Design Level 1 - Reactive	Assigned when the development and operation of specified unit system(s) has been carried out in accordance with the process for 'Level 1 – Reactive' detailed in the *ShipRight Procedure for Human-centred Design*.	The names of the systems which meet the requirements will be listed as a suffix to the character, e.g. **HCD1**(mooring area, ECDIS).

Part 4, Chapter 8
Welding and Structural Details

■ *Section 2*
Structural categories

Section 2.3 Workmanship and inspection

2.3.5 All NDE is to be performed in accordance with the requirements specified in Ch 13, 2 Specific requirements for ship hull structure and machinery of the ~~Rules for Materials~~ *Rules for the Manufacture, Testing and Certification of Materials, July 2019*, and the general NDE requirements as per *Ch 1, 5.1 General NDE Requirements* of the *Rules for the Manufacture, Testing and Certification of Materials, July 2019*

Part 11 Chapter 4
Cargo Containment

■ *Section 5*
Materials and construction

5.2 Construction processes

(Part only shown)

5.2.3 **Weld joint design**

(a) All welded joints of the shells of independent tanks shall be of the in-plane butt weld full penetration type. For dome-to-shell connections only, tee welds of the full penetration type may be used depending on the results of the tests carried out at the approval of the welding procedure. Except for small penetrations on domes, nozzle welds shall also be designed with full penetration.

Except for the dome-to-shell connections, T-butt welds will not be accepted in the shell.

This requirement is applicable to independent tanks of type A or type B, primarily constructed of plane surfaces. This includes the tank corners which are constructed using bent plating which is aligned with the tank surfaces and connected with in-plane welds.

The applicability of the expression ‘For dome-to-shell connections only’ is clarified as follows:

- Welded corners (i.e. corners made of weld metal) shall not be used in the main tank shell construction, i.e. corners between the shell side (sloped plane surfaces parallel to hopper or top side inclusive, if any) and bottom or top of the tank, and between the tank end transverse bulkheads and the bottom, top or shell sides (sloped plane surfaces inclusive, if any) of the tank. Instead, tank corners which are constructed using bent plating aligned with the tank surfaces and connected with in-plane welds, are to be used.
- Tee welds can be accepted for other localised constructions of the shell such as suction well, sump, dome, etc. where tee welds of full penetration type shall also be used.

(b) Welding joint details for Type C independent tanks, and for the liquid-tight primary barriers of Type B independent tanks primarily constructed of curved surfaces, shall be as follows:

i. All longitudinal and circumferential joints shall be of butt welded, full penetration, double vee or single vee type. Full penetration butt welds shall be obtained by double welding or by the use of backing rings. If used, backing rings shall be removed except from very small process pressure vessels. Other edge preparations may be permitted, depending on the results of the tests carried out at the approval of the welding procedure.

ii. The bevel preparation of the joints between the tank body and domes and between domes and relevant fittings shall be designed according to a standard acceptable to LR. All welds connecting nozzles, domes or other penetrations of the vessel and all welds connecting flanges to the vessel or nozzles shall be full penetration welds.

See also *Pt 5, Ch 10, 14 Construction* of the Rule for Ships.

The applicability of the expression “Other edge preparations” is clarified as follows:
- Cruciform full penetration welded joints in a bi-lobe tank with centreline bulkhead can be accepted for the tank structure construction at tank centreline welds with bevel preparation subject to the approval of LR, based on the results of the tests carried out at the approval of the welding procedure (*see* *Figure 4.5.1 Cruciform full penetration weld*).

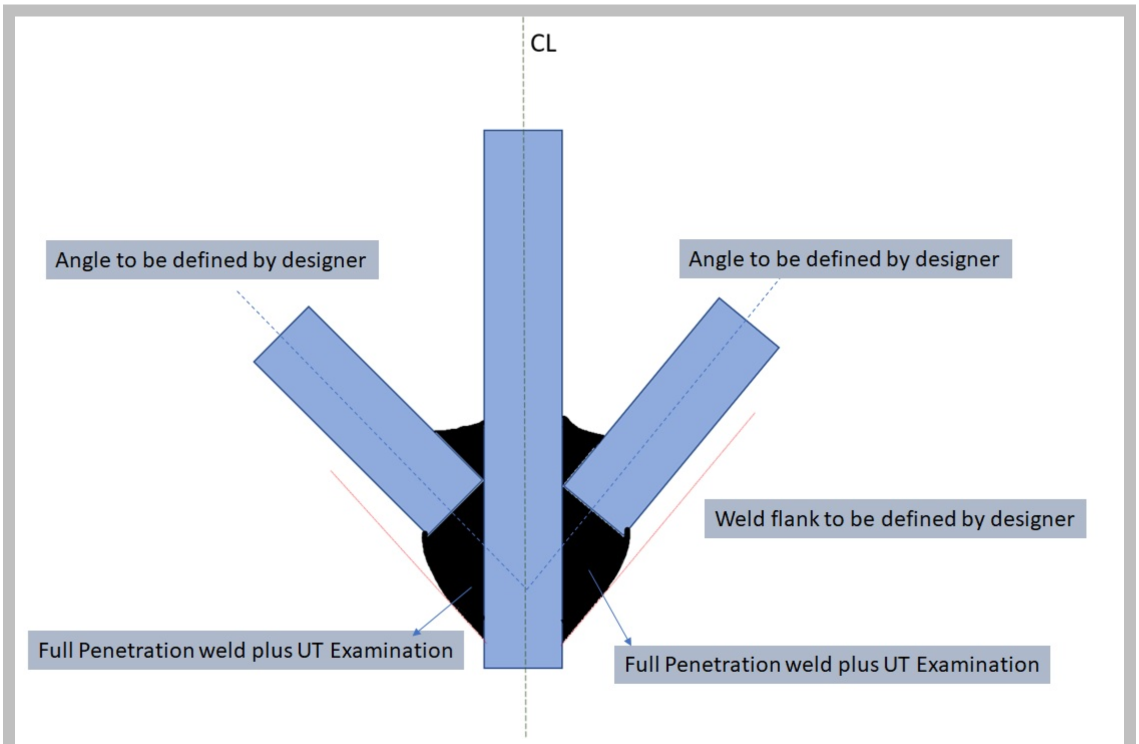
CL
Angle to be defined by designer
Angle to be defined by designer
Weld flank to be defined by designer
Full Penetration weld plus UT Examination
Full Penetration weld plus UT Examination

Figure 4.5.1 Cruciform full penetration weld

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Published by Lloyd's Register Group Limited
Registered office (Reg. no. 08126909)
71 Fenchurch Street, London, EC3M 4BS
United Kingdom

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